UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:
SE-5J

MEMORANDUM

DATE: JUN 0 8 2009

SUBJECT: ENFORCEMENT ACTION MEMORANDUM: Determination of an Imminent and Substantial Threat to Public Health and the Environment at Plainwell Dam #2 of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site, Allegan County, Michigan (Site ID# 059B)

FROM: Michael Ribordy, On-Scene Coordinator
Emergency Response Branch 2 - Section 3

THRU: Linda M. Nachowicz, Chief
Emergency Response Branch 2

TO: Richard C. Karl, Director
Superfund Division

I. PURPOSE

The purpose of this Action Memorandum is to document the determination of an imminent and substantial threat to public health and the environment at "Plainwell Dam #2," an area of contamination within Area 1 of the Kalamazoo River Operable Unit (OU) of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site (sometimes referred to as the "Site" or the "Kalamazoo River Site"). The Site, which is located in Allegan and Kalamazoo Counties, Michigan, is pervasively contaminated with polychlorinated biphenyl (PCB), primarily as the result of waste practices associated with the de-inking of carbonless copy paper. The Site was listed on the NPL on August 30, 1990.

The Plainwell Dam #2 is located approximately 3.5 miles upstream of the former Plainwell Dam in the Township of Gun Plain, T 1N, R 11 W, in portions of Sections 32 and 33 upstream to the Penn Central Railroad Bridge. Plainwell Dam #2 includes a

series of four historical structures constructed to partially divert the Kalamazoo River through the Plainwell mill race.

The response actions proposed in this Action Memorandum will mitigate threats to public health, welfare, and the environment presented by the presence of an uncontrolled release of PCBs, a hazardous substance, into the food chain of the Kalamazoo River from in-stream sediments, riverbank soils, and floodplain soils located within the Plainwell Dam #2. Due to the contaminated nature of the sediment, the continuing release of contamination into the food chain, and potential exposure to the public, this removal action will be classified as time-critical. The proposed response actions include dredging and/or excavation of sediment, riverbank soils and floodplain soil, containment, monitoring, water treatment, stabilization and off-Site disposal of excavated material in accordance with federal PCB regulations at 40 C.F.R. § 761.61. The response activities will require approximately 200 on-Site working days to complete, and will result in the removal of approximately 12,000 cubic yards of waste material, containing approximately 89% of the PCBs in the Plainwell Dam #2.

Subsequent to completion of the removal action and through the Superfund remedial process, Region 5 will complete its evaluation of the risks to human health and the environment presented by the presence of PCBs within the first reach of the Kalamazoo River OU of the Site (which includes the Plainwell Dam #2). This evaluation will consider data collected and analyses performed as part of the removal action described in this Action Memorandum. U.S. EPA will then issue a Record of Decision (ROD) for the entire first reach of the Kalamazoo River OU (*i.e.* Morrow Dam to the Plainwell Dam or Area 1) and, as part of that ROD, will determine whether additional response actions are necessary within the Plainwell Dam #2 to address risks to human health and the environment not addressed through the time-critical removal process.

One of the potentially responsible parties (PRPs) for the Site, Georgia-Pacific Corporation (GP), is prepared to conduct the time-critical removal action described in this Action Memorandum. GP is the owner of a now-inoperable papermaking facility at the Site. GP (or its predecessors-in-interest) engaged in the de-inking of carbonless copy paper, and discharged wastes containing high concentrations of PCB into the Kalamazoo River upstream of the Plainwell Dam #2.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID # MID006007306

A. Physical Location and Description

The Kalamazoo River Site includes approximately 80 miles of the Kalamazoo River between Morrow Dam and Lake Michigan, adjacent floodplains and wetlands, and four paper waste disposal areas and several former paper mill properties (to the extent they contribute PCB to the Kalamazoo River system). The Site lies within the Great Lakes

Basin in the Kalamazoo River watershed of Michigan's Lower Peninsula. The watershed drains 2,020 square miles of southwest Michigan. It reaches 162 miles into south-central Michigan, and ranges in width from 11 to 29 miles.

The main channel of the Kalamazoo River flows northwest for 123 miles before ultimately emptying into Lake Michigan near Saugatuk, Michigan. The river contributes 42 pounds of PCB annually to Lake Michigan.

Site topography is influenced largely by past glacial activity. The area is relatively flat with gentle rolling plains. In general, the land surface slopes gently westward toward Lake Michigan. Ground and terminal moraines, eskers, and drumlins provide the only significant relief over the region. Low elevation areas are typically wetlands or bodies of open water, such as kettle lakes. Drainage patterns center around the former meltwater drainageway, which is now, at its lowest points, occupied by the Kalamazoo River. The river itself drops 540 feet in elevation from its headwaters to its mouth, producing a slow to moderate stream gradient.

Plainwell Dam #2 is located on the Kalamazoo River approximately 3.5 miles upstream of the former Plainwell Dam in the city of Plainwell and Gun Plain Township, Allegan County. Plainwell Dam #2 includes a series of four historical structures constructed to partially divert the Kalamazoo River through the Plainwell mill race. The mill race and the Kalamazoo River encircle the City of Plainwell, giving Plainwell its identity as the "Island City." State and local officials have expressed intentions to leave the Plainwell Dam #2 structures in place to continue to provide flow through the mill race and preserve the character of the city.

The remnant structures—a waste gate structure, a right diversion structure, a left diversion structure, and a head gate structure —were initially constructed in 1856 by the Plainwell Water Power Company. Earthen embankments, approximately 2,520 feet in total length, are also present to connect two diversion structures. These right and left diversion structures consist of concrete spillway gate bays and a concrete spillway, respectively (no gates remain in the right diversion structure). An earthen embankment connects the left abutment of the left diversion structure and the head gate structure. The diversion structures direct water from the main stem of the river into a mill race/power canal that was once used to generate water power for a flour mill, the City of Plainwell, and several other businesses. The head gate and waste gate structures in the power canal were formerly used to regulate the head and discharge through the powerhouse. The head gate structure consists of a concrete spillway with no control devices. The waste gate structure consisted of two sluice ways for which the gates are no longer in place.

Plainwell Dam #2 did not significantly alter the shape or surface area of the river, nor did it create lake-like impoundments as in the case of downstream former dams. It did serve to alter flooding characteristics of the river to some degree upstream of the dam. According to the Michigan Department of Environmental Quality (MDEQ), the Plainwell Dam #2 and associated structures were partially removed in the early 1980s. The

waste gate structure's lift gate and stoplog guides were still present in 1980, and at that time there were no active operational procedures in place other than to permanently leave all discharge control structures adjusted so that they would permit maximum discharge capacity.

In 1979, Plainwell Dam #2 was classified as a small size dam with high hazard potential in accordance with the National Dam Safety Program Criteria. Following the partial removal of the dam and associated structures in the 1980s, the dam was reclassified as a low hazard potential. The primary continuing purpose of the remaining structures is to maintain flow through the mill race/power canal, which along with the Kalamazoo River, encircles the city of Plainwell.

B. Environmental Justice Analysis

To meet Region 5's Environmental Justice (EJ) concern criteria, the area within 1 mile of a site must have a population that is at least twice the state's average low-income percentage and/or twice the state minority percentage. Among all Michigan residents, the low-income percentage is 29% and the minority percentage is 21%. U.S. EPA's EJ analysis of the population within 1 mile of the Plainwell Dam #2 determined that the low-income percentage is 24% and the minority percentage is 6%. Therefore, the Plainwell Dam #2 does not meet the Region's EJ criteria based on demographics, as identified in "Region 5 Interim Guidelines for Identifying and Addressing a Potential EJ Case, June 1998."

C. Site Assessments

The Administrative Record for the Kalamazoo River Site contains numerous reports which summarize the investigations conducted to date. Detailed information from the reports most relevant to this time-critical removal action is set forth here:

1. Remedial Investigation/Feasibility Study (RI/FS)

Between 1990 and 2000, several PRPs for the Site (including GP) conducted a Site-wide RI/FS pursuant to an administrative agreement with the State of Michigan. The RI field work included an assessment of the physical characteristics of the riverbanks within the three former impoundments. The PRPs concluded, primarily through visual observation, that the riverbanks were a source of ongoing loading of exposed sediments (and therefore PCB) to the river. The PRPs also identified, again primarily through visual observation, some of the mechanisms involved in such loading. The cohesive nature of the exposed sediments allows significant portions of the impoundments' riverbanks to remain in vertical-to-near-vertical repose. The fine-grained exposed sediments, however, generally overlie non-cohesive sandy sediments or soils. As a result, the faces of the banks are susceptible to erosion through direct contact with the river at higher river stages, and to undercutting by erosion of the underlying non-cohesive sediments or soils. Undercutting progresses until the overlying sediments fail by slumping or calving as blocks that fall into the river. The remnants of such blocks

could be observed along the toe of the banks in certain areas. Although the assessment pertains to the entire Kalamazoo River OU and not solely to the Plainwell Dam #2, the risk analysis is relevant to Region 5's determination of imminent and substantial endangerment in this Action Memorandum.

2. USGS Study.

In 2005, USGS, in cooperation with U.S. EPA and MDEQ, conducted an additional study of the channel characteristics of the Kalamazoo River. This study concluded that the erosion of the "toe" of the bank widens the River's stream, and results in steeper bank bangles. Once the bank undercut exceeds its critical bank angle, the inability of the sediments to support themselves results in bank failure.

3. PRP-Supplemental Remedial Investigation/Feasibility Study

Beginning in 2007 and continuing through 2008, investigations in Area 1 of the Kalamazoo River OU, including Plainwell Dam #2, were conducted as part of the Supplemental Remedial Investigation/Feasibility Study (SRI/FS). Phase 1 of that work involved the delineation of frequently inundated areas of the floodplain upstream of Plainwell Dam #2. Phase 2 of the investigation involved the sampling of Plainwell Dam #2. Results of the Phase 2 investigation of Plainwell Dam #2 found elevated levels of PCBs in bank and floodplain soils and, to a limited extent, in in-stream sediment. Samples were collected at 94 locations from a uniform grid in the floodplain, including in-stream islands. A total of 302 individual samples were collected from the floodplain, and total PCB concentrations ranged from non-detect to 60 milligrams per kilogram (mg/kg). Bank soil samples were collected from 78 locations. A total of 265 samples were analyzed for PCBs, with total PCB concentrations ranging from non-detect to 45 mg/kg. Sediment samples were collected from 60 locations, resulting in 267 samples analyzed for PCBs. PCB concentrations in sediment ranged from non-detect to 100 mg/kg. A summary of the investigation results is presented in the Plainwell No. 2 Conceptual Design Report.

MDEQ Plainwell Dam #2 Sampling

On December 10 and 11, 2008, MDEQ collected 30 sediment cores and 18 bank cores. A total of 50 individual sediment and 25 soil samples were analyzed for PCBs. Total PCB concentrations in sediment ranged from non-detect to 80.2 mg/kg. Total PCB concentrations in soil ranged from non-detect to 80.5 mg/kg.

D. Risk Assessments

1. Human Health Risk Assessments.

The Michigan Department of Natural Resources first issued a public health advisory regarding PCB contamination in the Kalamazoo River in 1977. This advisory remains in place today and warns against eating a variety of fish species from the river.

In December 1991, working under a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR), the Michigan Department of Public Health (MDPH) prepared a Public Health Assessment (PHA) for the Kalamazoo River Site. The PHA indicated that the Site was a public health hazard because of the probable exposure to hazardous substances at concentrations that might result in adverse health effects. Potential human exposure pathways of concern included incidental ingestion, inhalation of contaminated soils, and ingestion of contaminated biota.

In April 2003, MDNR completed work on the human health risk assessment for the Site. Although the human health risk assessment's data and analysis pertain to the entire Kalamazoo River OU and not solely to the Plainwell Dam #2, the risk analysis is relevant to Region 5's determination of imminent and substantial endangerment in this Action Memorandum. The primary human health risks identified in the assessment are summarized here:

- Cancer risks and noncarcinogenic Hazard Quotients (HQ) exceed U.S. EPA and/or MDEQ acceptable risk limits[1] (cumulative carcinogenic risk greater than 10^{-4}, and the non-carcinogenic hazard quotient is greater than 1) for both sport and subsistence fishermen. Carcinogenic risk from the consumption of fish ranges from 9.0×10^{-5} to 1.7×10^{-3} depending on the river segment being evaluated. Noncarcinogenic HQs for the consumption of fish range from 1.7 to 80 for reproductive effects and 5.3 to 280 for immunological effects.

- Cancer risks for recreational users on the floodplain soil in the vicinity of the Plainwell Dam #2 exceed MDEQ's threshold based on maximum PCB exposure concentrations.

- HQs for recreational users on the floodplain soil in the vicinity of the Plainwell Dam #2 exceed the U.S. EPA and MDEQ threshold of 1 for reproductive effects based on maximum PCB exposure concentrations.

[1] MDEQ has established a cancer risk target value of 1 in 100,000 (10^{-5}). Where cumulative cancer risks exceed this threshold, MDEQ risk managers may determine that some action to reduce exposure and risk may be necessary. The MDEQ risk target falls in the middle of U.S. EPA's risk range of 1 in 1,000,000 (10^{-6}) to 1 in 10,000 (10^{-4}). U.S. EPA generally considers risks within this range "acceptable," but considerations such as size of affected population may indicate that some action to reduce risk is appropriate. Above this range, U.S. EPA risk managers will ordinarily determine that such action is necessary. Both MDEQ and U.S. EPA have HQ thresholds of 1.

2. Ecological Risk Assessment

MDEQ finalized the Ecological Risk Assessment (ERA) for the Kalamazoo River in April 2003. Like the Human Health Risk Assessment, the ERA's data and analysis pertain to the entire Kalamazoo River OU. Nevertheless, the ERA's findings are also relevant to Region 5's determination of imminent and substantial endangerment at the Plainwell Dam #2. Accordingly, the primary findings from the ERA are explained here.

The ERA focused primarily on assessing population-level risks associated with PCB contamination in abiotic media and biota. Because of the potential for PCBs to accumulate in biological tissues and exert adverse effects in upper trophic level biota, the ERA specifically considered bioaccumulation, food chain effects, and adverse effects in upper trophic level organisms.

The ERA focused on assessing the risks from PCB exposures via direct contact with contaminated surface water, streambed sediment, floodplain (exposed) sediment, and surface soil, as well as ingestion of PCB-contaminated food items.

The ERA concluded that PCB contamination at the Site presents a high to moderate ecological risk for eight animal species. Table 5.3 of the study identifies the estimated risks for all representative species of concern, based on estimated PCB dose (birds and mammals) or on the Site-wide average PCB concentration (aquatic receptors).

More particularly, the ERA found that PCB contamination of surface water and streambed sediment (and floodplain soils that are frequently inundated or have the potential to erode into the river) is likely to adversely affect sensitive piscivorous predators such as mink through consumption of PCB-contaminated prey, especially fish. Other piscivorous predators, such as bald eagles, also appear to be at high risk based on the exposure assumptions presented in the ERA. Terrestrial and semi-aquatic biota may also be at risk from PCB-contaminated floodplain sediment and surface soil, depending on life history (e.g. foraging behavior, diet, mobility) and sensitivity to PCBs. Omnivorous birds (represented by the robin) that consume substantial numbers of soil invertebrates, such as earthworms, appear to be at moderate but still significant risk.

Finally, the United States Fish and Wildlife Service has identified two federally endangered species, two federally threatened species, and one federal candidate species that can be present in Allegan County. The Karner blue butterfly and the Indiana bat both are endangered. The bald eagle and Pitcher's thistle (a plant) are both threatened in this region. The eastern massasauga rattlesnake is the lone candidate species (BBL 2000b).

The MDNR lists seven species as endangered or threatened (not including the federally-listed species) in or near the Site. Endangered species in this area include the zigzag bladderwort, wild American ginseng, and the log fern (plants), the creek

chubsucker (fish), prairie warbler (bird), ottoe skipper (insect), and the spotted turtle (reptile) (BBL 2000b).

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions present at the Plainwell Dam #2 of the Kalamazoo River Site constitute a threat to public health, welfare or the environment based upon the factors set forth in 40 C.F.R. § 300.415(b)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). These include, but may not be limited to, the following:

- Actual or potential exposure to nearby populations, animals, or the food chain from hazardous substances or pollutants or contaminants.

PCBs are a hazardous substance, as that term is defined by Section 101(14) of CERCLA. PCBs are also listed as a hazardous substance under Section 311(b)(2) of the Clean Water Act, as set forth in 40 C.F.R. § 116.4 Table A. The Toxic Substances Control Act (TSCA) states that "exposure of human beings or the environment to PCBs... may be significant, depending upon the quantity of PCBs,...the likelihood of exposure to humans and the environment...." U.S. EPA has determined that PCBs are a probable human carcinogen. These chemicals have the potential to biomagnify, which means that they have the potential to increase in concentration as they are transferred from one link in the food chain to another.

Plainwell Dam #2 has PCB levels up to 100 mg/kg for in-stream sediments, 80.5 mg/kg in top-of-bank soils and 60 mg/kg in floodplain soils. The ongoing, uncontrolled erosion of soils from the riverbanks is a significant source of PCB loading to the Kalamazoo River. The RI/FS determined PCB-containing waste paper residuals and soils slough off the banks, to be deposited in the river or transported downstream. In-stream sediments and bank soils are primary sources of an ongoing release of PCBs into the waters of the Kalamazoo River.

Although the 1977 MDPH advisory is still in effect, the fish consumption advisory is simply that – advisory. MDPH personnel have observed that the Kalamazoo River between Kalamazoo and Plainwell is becoming a popular fishery. It has been reported that anglers have been taking home fish in amounts that may be inconsistent with the consumption advisories issued by the MDPH. It was also reported that turtles have also been taken from the river for human consumption, which would provide for another potential human exposure pathway.

The most significant outcome of the ecological and human health risk assessments is the conclusion that fish consumption is the primary exposure pathway for receptors that may be at risk from PCB within media of the Kalamazoo River. Therefore, the key to reducing exposure and potential risks to important receptors (e.g. fish-eating birds, fish-

eating wildlife, and humans) is to reduce PCB concentrations in the fish tissue consumed by these receptors. The RI/FS concluded the greatest factor controlling PCB levels in fish is the bioavailability of PCB in surface sediments and the water column where fish and their prey come in contact with or ingest PCB.

- High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate;

Total PCB concentrations of up to 100 mg/kg have been found in the sediments, bank and floodplain soils of the Plainwell Dam #2. As explained above, the sediments, bank and floodplain soils that are located in-stream or near the river's edge are susceptible to erosion and scouring. During high water events, inundation of the floodplain soils and increases in river velocity create conditions that are likely to cause additional releases of PCB to the Kalamazoo River and, ultimately, Lake Michigan.

- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released;

The Kalamazoo River is often subjected to extreme weather conditions in the winter and spring, which enhance the threat of a release of PCB. The breakup of ice in the late winter, and the movement of ice floes downstream, may cause scouring of the banks and river bottom. Likewise, heavy spring rains and/or summer storms increase stream volume and current velocity, which lead to increased scouring of the river bottom and banks. All of these forces cause an increase in the volume and extent of PCB contamination in the Kalamazoo River and Lake Michigan.

IV. ENDANGERMENT DETERMINATION

Given the conditions at the Plainwell Dam #2, the nature of the hazardous substance there, and the potential exposure pathways described above, the actual or threatened release of PCB from the Plainwell Dam #2, if not addressed by implementing the response actions selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. PROPOSED ACTIONS

A. Description of the Proposed Action

The preferred response action to mitigate threats associated with PCB-contaminated sediments in the Plainwell Dam #2 consists of removing contaminated submerged sediments, bank and floodplain soils. The administrative settlement agreement and order on consent to perform the work will specify all required response actions, which will include, but may not be limited to, the following tasks:

1) dredging and/or excavation of PCB contaminated sediments with elevated PCB concentrations in those areas specified in the U.S. EPA approved workplan;

2) cut-back and stabilization of riverbanks to mitigate exposures to PCB-contaminated banks and future erosion;

3) removal of PCB-contaminated floodplain soils in excess of 50 mg/kg PCB;

4) dewatering, as necessary, and disposal off-site of all PCB-contaminated sediment, bank and floodplain soils removed pursuant to ¶¶ 1-3 above. PCB contaminated material with PCB concentrations equal to or greater than 50 mg/kg shall be transported off-site to a chemical waste landfill that is in compliance with all state and federal regulatory requirements. PCB contaminated material with PCB concentrations less than 50 mg/kg shall be transported off-Site and disposed in an appropriately licensed and permitted commercial landfill in compliance with all state and local laws.

5) monitoring during implementation of the response action; and

6) the response action shall ensure that a stable river channel exists post-removal, re-vegetation with native plant species occurs, and that appropriate monitoring and maintenance is performed both during and after the response action.

The response action will be conducted in a manner not inconsistent with the NCP. The OSC has initiated planning for provision of post-removal site control consistent with the provisions of Section 300.415(l) of the NCP. Post removal control activities will be performed by one of the PRPs per the removal administrative order on consent.

The response actions described in this memorandum directly address actual or threatened releases of hazardous substances, pollutants, or contaminants at the Plainwell Dam #2 which may pose an imminent and substantial endangerment to public health, welfare and the environment. These response actions do not impose a burden on the affected property disproportionate to the extent to which that property contributes to the conditions being addressed.

These activities will require an estimated 200 on-site working days to complete.

B. Cleanup Standards

As noted above, subsequent to the completion of the proposed time-critical removal action, Region 5 will evaluate any residual risk to human health and the environment in an RI/FS for the first reach of the Kalamazoo River, which includes the Plainwell Dam #2. Remedial cleanup standards will be established in the FS and in the ROD for the entire first reach. For purposes of the proposed time-critical removal action, Region 5 has established the following cleanup standards:

- Designated in-stream sediments: The cleanup goal for sediment is ≤1 mg/kg PCB standard. Reasonable efforts will be made to reach this goal including excavating to a "neat line" representing an elevation where Supplemental RI/FS data from this area indicates PCB concentrations at or below the cleanup goal.

- PCB-contaminated soils within the Plainwell Dam #2 area and floodplain soils: The cleanup goal for these soils is 5 mg/kg.

The Design Report will specify other project requirements to be completed as part of this removal action.

C. Orderly Transition to Remedial Response

The NCP requires that, if U.S. EPA determines that a removal action will not fully address a release, and that subsequent remedial action may be necessary, then the Agency must ensure an orderly transition from removal to remedial response activities. 40 C.F.R. § 300.415(g). As noted above, subsequent to the removal action selected in this Action Memorandum, Region 5 will complete its evaluation, through the Superfund remedial process, of the risks to human health and the environment within the entire Area 1 of the Kalamazoo River OU (which includes the Plainwell Dam #2). Residual risks to human health and the environment remaining within Plainwell Dam #2 after completion of the removal action will be evaluated as part of that process. If U.S. EPA determines that additional response work is necessary in Plainwell Dam #2, such work will be required by the ROD.

D. Applicable or Relevant And Appropriate Requirements

All applicable or relevant and appropriate requirements (ARARs) of federal and state law will be complied with to the extent practicable. By letter dated May 21, 2009, Region 5 requested that MDEQ identify potential state ARARs for this response action. Any state ARARs identified in a timely manner for this removal action will be complied with to the extent practicable.

E. Compliance with the PCB Remediation Waste Rule

The PCB Remediation Waste Rule, 40 C.F.R. § 761.61 *et seq.*, promulgated pursuant to TSCA is an ARAR for the proposed removal action. U.S. EPA has evaluated the necessary information required for approving the method of risk-based disposal of PCB remediation waste and such information is in the administrative record. 40 C.F.R. § 761.61(a)(3) and § 761.61(c). Based on this evaluation and after consultation with the Region 5 TSCA program, the Region 5 Superfund Division Director has determined that the disposal method proposed in Paragraph 4 of Section V.A. of this Action Memorandum does not pose an unreasonable risk of injury to public health or the environment. By signature on this Action Memorandum, and pursuant to 40 C.F.R. §

761.61(c), the Region 5 Superfund Division Director approves the risk-based disposal of PCB-contaminated material in the manner described in Paragraph 4 of Section V.A.

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Continued risk to public health and the environment will result if response action is delayed or not taken. Delayed action increases the likelihood that human and/or wildlife populations with access to the area will come into direct contact with PCB-contaminated sediments and floodplain soils.

VII. OUTSTANDING POLICY ISSUES

No outstanding policy issues have been identified in relation to Plainwell Dam #2.

IX. RECOMMENDATION

This decision document represents the selected response action for the Plainwell Dam #2 area of the Kalamazoo River Site. It was developed in accordance with CERCLA as amended, and is not inconsistent with the NCP. This decision is based upon the Administrative Record (Attachment 2) for the removal action, an index of which is attached to this Action Memorandum.

Conditions at the Plainwell Dam #2 meet the criteria of Section 300.415(b)(2) of the NCP for a removal action, and I recommend your approval of the proposed removal action. Region 5 expects that a potentially responsible party will perform all removal actions under the oversight of the OSC. You may indicate your decision by signing below.

APPROVE: _____ DATE: 6/8/09
Richard C. Karl,
Director, Superfund Division

DISAPPROVE: _____ DATE: _____
Richard C. Karl,
Director, Superfund Division

Enforcement Addendum

Attachments:

Environmental Justice Analysis
Administrative Record Index

cc: D. Chung, U.S. EPA, 5203-G
M. Chezik, U.S. DOI, w/o Enf. Addendum
Steven E. Chester, Director, Michigan DEQ, w/o Enf. Addendum
Michael Cox, Michigan Attorney General, w/o Enf. Addendum

BCC PAGE

(REDACTED 1 PAGE)

NOT RELEVANT TO THE SELECTION OF THE REMOVAL ACTION

ENFORCEMENT CONFIDENTIAL ADDENDUM

ENFORCEMENT ADDENDUM

PLAINWELL DAM #2
ALLIED PAPER/PORTAGE CREEK/KALAMAZOO RIVER SITE
ELYRIA, LORAIN COUNTY, OHIO

(REDACTED 1 PAGE)

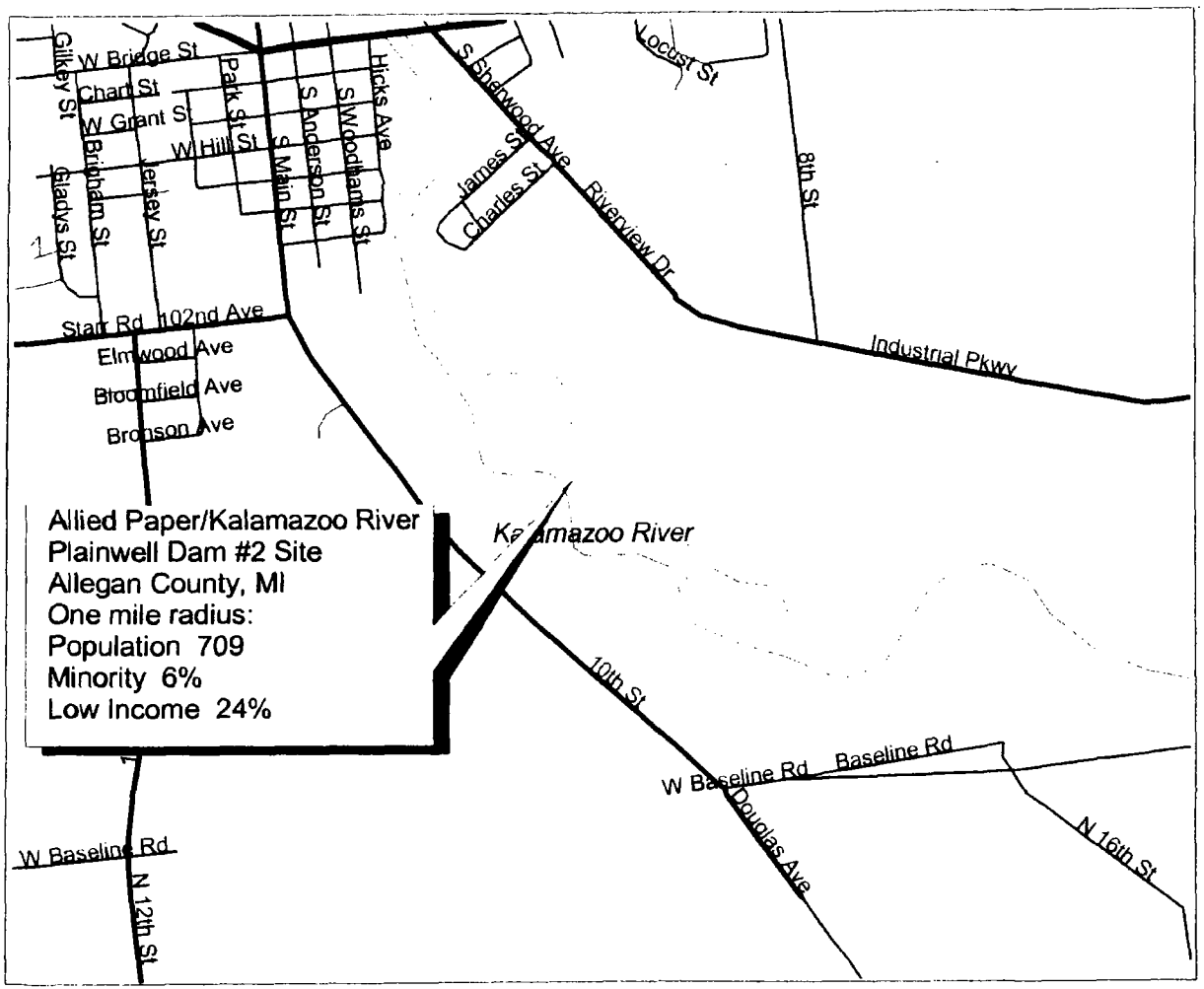
ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY

Attachment 1

EJ Analysis

Region 5 Superfund EJ Analysis

Allied Paper/Kalamazoo River
Plainwell Dam #2 Site



State of Michigan averages:
Minority: 21%
Low Income: 29%

U.S. EPA Region 5
Environmental Justice Case Criteria
for State of Michigan

Minority: 42% or greater

Low Income: 58% or greater

Date of Map: 4/16/09

Source of Map: Census 2000 Database/
ArcView 3.0

Attachment 2

Administrative Record Index

ATTACHMENT 2

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
ALLIED PAPER/PORTAGE CREEK/KALAMAZOO RIVER SITE
PLAINWELL DAM #2
KALAMAZOO, KALAMAZOO COUNTY, MICHIGAN

ORIGINAL
JUNE 8, 2009

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
1	12/23/91	ATSDR	U.S. EPA	Preliminary Health Assessment for the Allied Corp. Kalamazoo Plant **(SDMS ID: 167821)**	42
2	10/00/00	Blasland, Bouck & Lee, Inc.	U.S. EPA	Feasibility Study Report - Phase I for the Allied Paper/Portage Creek/Kalamazoo River Site **(DRAFT FOR STATE AND FEDERAL REVIEW) (SDMS ID: 249488)**	407
3	10/00/00	Blasland, Bouck & Lee, Inc.	U.S. EPA	Remedial Investigation Report - Phase I for the Allied Paper/Portage Creek/Kalamazoo River Site **(DRAFT FOR STATE AND FEDERAL REVIEW) (SDMS ID: 249490)**	653
4	02/01/02	Roy F. Weston, Inc.	U.S. EPA	Removal Assessment Report for the Allied Paper-Kalamazoo River Site **(SDMS ID: 205878)**	777
5	04/00/03	Camp, Dresser & McKee	U.S. EPA	Baseline Ecological Risk Assessment for the Allied Paper/Portage Creek/ Kalamazoo River Site (FINAL REVISED) **(SDMS ID: 249487)**	140
6	04/00/03	CH2M Hill	U.S. EPA	Remedial Investigation Report for the Allied Paper/Portage Creek/ Kalamazoo River Site **(U.S. EPA INTERNAL DRAFT) (SDMS ID: 249495)**	103
7	05/00/03	Camp, Dresser & McKee	U.S. EPA	Human Health Risk Assess-ment for the Allied Paper/ Portage Creek/Kalamazoo River Site (FINAL REVISED) **(SDMS ID: 249486)**	109

NO.	DATE	AUTHOR	RECIPIENT	TITLE/DESCRIPTION	PAGES
8	07/25/06	ATSDR	File	Health Consultation: ATSDR Response to Public Advisory Council for Kalamazoo River Area of Concern RAP Comments on the Public Health Assessment for the Allied Paper/Portage Creek/Kalamazoo River Site **(SDMS ID: 249492)**	18
9	02/14/07	Borries, S., U.S. EPA	Karl, R., U.S. EPA	Enforcement Action Memorandum: Determination of an Imminent and Substantial Threat to Public Health and the Environment at the Plainwell Impoundment Area of the Allied Paper/Portage Creek/ Kalamazoo River Site **(PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED) (SDMS ID: 290423)**	15
10	11/04/08	Erickson, M., ARCADIS	Saric, J., U.S. EPA	Conceptual Design Report for Bank Removal and Restoration Plainwell No. 2 Dam Area	
11	12/29/08	Camp, Dresser & McKee	U.S. EPA	Certificates of Analysis, Chain of Custody Records and Sediment Core Logs for the Plainwell Dam #2 Investigation	
12	05/21/09	Ribordy, M., U.S. EPA	Bucholtz, P., MDEQ	Letter re: Request for State ARARs for the Plainwell Dam #2 Site	
13	00/00/00	Ribordy, M., U.S. EPA	Karl, R., U.S. EPA	Enforcement Action Memorandum: Determination of an Imminent and Substantial Threat to Public Health and the Environment at Plainwell Dam #2 of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site **(PENDING)**	